TENDER DOCUMENT

NIT No DLI/C&E/WI-675/520

FOR


VOLUME – 2C
(TENDER DRAWINGS)

ENGINEERING PROJECTS (INDIA) LIMITED
(A GOVT. OF INDIA ENTERPRISE)
Core-3, Scope Complex, 7,
Lodhi Road, New Delhi-110003
TEL NO: 011-24361666 FAX NO. 011- 24363426
## Contents- (Volume-2)

NIT No. DLI/C&E/WI-675/520

<table>
<thead>
<tr>
<th>S.No,</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volume-2A  (General Specifications)</td>
</tr>
<tr>
<td></td>
<td>- Introduction</td>
</tr>
<tr>
<td></td>
<td>- General Requirements  (Project Synopsis, GTR, PG, Inspection &amp; Testing, Painting etc.)</td>
</tr>
<tr>
<td></td>
<td>- List of Approved Vendors</td>
</tr>
<tr>
<td></td>
<td>- List of Preferred makes</td>
</tr>
<tr>
<td>2</td>
<td>Volume-2B  (Technical Specs.)</td>
</tr>
<tr>
<td></td>
<td>- Scope of work</td>
</tr>
<tr>
<td></td>
<td>- Technical Spec. Chapter 4</td>
</tr>
<tr>
<td></td>
<td>- GS - 9 Painting</td>
</tr>
<tr>
<td>3</td>
<td>Volume-2C  (Tender Drawings)</td>
</tr>
</tbody>
</table>
NOTES FOR LDB SLDB ELDB & ESLDB:

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.
2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.
3. Enclosure class IP54 & IP55 (with canopy) for outdoor installation.
4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).
5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.
6. The Cable entry - Incomer: Bottom cable entry and Outgoing: Top / Bottom cable entry.
7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.
8. All the components shall be accessible from front.
9. Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.
10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.
11. Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.
12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.
13. Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.
14. Doors shall have concealed hinges.
15. Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:
   - 5 mm for components and module name plates.
16. Danger board on front and rear sides in English, Hindi and local language.
17. Earthing two separate earthing terminals will be provided.
18. Limiting dimensions:
   - Width of SLDB: 800 mm
   - Depth of SLDB: 300 mm
   - Height of SLDB: 400 mm (min)
22. 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5
23. Marking - Wiring will be properly marked as per relevant IS.
24. Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.
25. Cable glands Double compression cable glands for receiving cables.
7.0 MTPA EXPANSION

MECON LIMITED

BHILAI STEEL PLANT, BHILAI, CHHATTISGARH

NOTES FOR LDB SLDB ELDB & ESLDB -

1.0 The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.

7.0 The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions -

   Width of SLDB: - 800 mm
   Depth of SLDB: - 300 mm
   Height of SLDB: - 400 mm (min)


20.0 The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 -1981.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5

23.0 Marking - Wiring will be properly marked as per relevant IS.

24.0 Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB -

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3. Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6. The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.

7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8. All the components shall be accessible from front.

9. Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11. Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13. Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14. Doors shall have concealed hinges.

15. Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of :- 5 mm for components and module name plates.

16. Danger board on front and rear sides in English, Hindi and local language.

17. Earthing two separate earthing terminals will be provided.

18. Limiting dimensions -
   - Width of SLDB: - 800 mm
   - Depth of SLDB: - 300 mm
   - Height of SLDB: - 400 mm (min)


20. The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082-1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.


22. 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5 square mm.

23. Marking - Wiring will be properly marked as per relevant IS.

24. Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25. Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB: -

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3. Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6. The Cable entry - Incomer: Bottom cable entry and Outgoing: Top / Bottom cable entry.

7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8. All the components shall be accessible from front.

9. Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11. Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13. Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14. Doors shall have concealed hinges.

15. Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:- 5 mm for components and module name plates.

16. Danger board on front and rear sides in English, Hindi and local language.

17. Earthing two separate earthing terminals will be provided.

18. Limiting dimensions - Width of SLDB: 800 mm, Depth of SLDB: 300 mm, Height of SLDB: 400 mm (min).


20. The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 -1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.


22. 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5.

23. Marking - Wiring will be properly marked as per relevant IS.

24. Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25. Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB: -

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3. Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6. The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.

7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8. All the components shall be accessible from front.

9. Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11. Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13. Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14. Doors shall have concealed hinges.

15. Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:

   5 mm for components and module name plates.

16. Danger board on front and rear sides in English, Hindi and local language.

17. Earthing two separate earthing terminals will be provided.

18. Limiting dimensions:
   - Width of SLDB: - 800 mm
   - Depth of SLDB: - 300 mm
   - Height of SLDB: - 400 mm (min)


20. The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 -1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.


22. 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5 sq.mm.

23. Marking - Wiring will be properly marked as per relevant IS.

24. Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25. Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB:

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.
2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.
3. Enclosure class IP54 & IP55 (with canopy) for outdoor installation.
4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).
5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.
6. The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.
7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.
8. All the components shall be accessible from front.
9. Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.
10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.
11. Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.
12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.
13. Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.
14. Doors shall have concealed hinges.
15. Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:- 5 mm for components and module name plates.
16. Danger board on front and rear sides in English, Hindi and local language.
17. Earthing two separate earthing terminals will be provided.
18. Limiting dimensions - Width of SLDB: - 800 mm - Depth of SLDB: - 300 mm - Height of SLDB: - 400 mm (min)
20. The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 -1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin
22. 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5
23. Marking - Wiring will be properly marked as per relevant IS.
24. Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.
25. Cable glands Double compression cable glands for receiving cables.

FOR TENDER PURPOSE ONLY
Bearing to be read in conjunction with TS/GTS.

MECON LIMITED

Bhilai Steel Plant, Bhilai, Chhattisgarh
7.0 MTPA Expansion

SINGLE LINE DIAGRAM FOR ELI

NOTICE: This drawing is for the exclusive use of the owner and any reproduction or disclosure to any other parties is strictly prohibited.
7.0 MTPA EXPANSION
MECON LIMITED
BHILAI STEEL PLANT, BHILAI, CHHATTISGARH

NOTES FOR LDB SLDB ELDB & ESLDB:

1.0 The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.

7.0 The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:
5 mm for components and module name plates.

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions:
- Width of SLDB: - 800 mm
- Depth of SLDB: - 300 mm
- Height of SLDB: - 400 mm (min)


20.0 Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082-1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5.

23.0 Marking - Wiring will be properly marked as per relevant IS.

24.0 Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB:-

1.0 The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.

7.0 The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:- 5 mm for components and module name plates.

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions - Width of SLDB: - 800 mm - Depth of SLDB: - 300 mm - Height of SLDB: - 400 mm (min)


20.0 The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 - 1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5

23.0 Marking - Wiring will be properly marked as per relevant IS.

24.0 Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB:

1.0 The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The Cable entry - Incomer: Bottom cable entry and Outgoing: Top / Bottom cable entry.

7.0 The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:
   - 5 mm for components and module name plates.

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions:
   - Width of SLDB: 800 mm
   - Depth of SLDB: 300 mm
   - Height of SLDB: 400 mm (min)


20.0 Busbars Arrangement Three phase & neutral.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5

23.0 Marking - Wiring will be properly marked as per relevant IS.

24.0 Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.

FOR TENDER PURPOSE ONLY
DRAWING TO BE READ IN CONJUNCTION WITH TS/GTS.
NOTES FOR LDB SLDB ELDB & ESLDB:

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.
2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.
3. Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.
4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).
5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.
6. The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.
7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.
8. All the components shall be accessible from front.
9. Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.
10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.
11. Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.
12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.
13. Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.
14. Doors shall have concealed hinges.
15. Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:
   - 5 mm for components and module name plates.
   - Danger board on front and rear sides in English, Hindi and local language.
17. Earthing two separate earthing terminals will be provided.

Limiting dimensions:
- Width of SLDB: - 800 mm
- Depth of SLDB: - 300 mm
- Height of SLDB: - 400 mm (min)


Busbars Arrangement
Three phase & neutral.
Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 -1981.
Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.

Isolating Equipment
3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5 sq.mm

Marking - Wiring will be properly marked as per relevant IS.

Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB:

1.0 The LDB, SLDB, ELDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, SLDB, ELDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, SLDB, ELDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The cable entry - Incomer: Bottom cable entry and Outgoing: Top / Bottom cable entry.

7.0 The LDB, SLDB, ELDB & ESLD shall be One Incomer and outgoing.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions:
   - Width of SLDB: 800 mm
   - Depth of SLDB: 300 mm
   - Height of SLDB: 400 mm (min)


20.0 The busbar Arrangement Three phase & neutral, Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082-1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5

23.0 Marking Wiring will be properly marked as per relevant IS.

24.0 Terminals Power & control terminals shall be segregated by insulating material like Hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB:–

1.0 The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The Cable entry - Incomer: Bottom cable entry and Outgoing: Top / Bottom cable entry.

7.0 The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of:– 5 mm for components and module name plates.

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions -
   - Width of SLDB: 800 mm
   - Depth of SLDB: 300 mm
   - Height of SLDB: 400 mm (min)


20.0 The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082-1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5 mm².

23.0 Marking - Wiring will be properly marked as per relevant IS.

24.0 Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB :-

1.0 The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.

2.0 The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.

3.0 Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.

4.0 Type of execution Single front, Installation Indoor / Outdoor (with canopy).

5.0 The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.

6.0 The Cable entry - Incomer: - Bottom cable entry and Outgoing: - Top / Bottom cable entry.

7.0 The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoings.

8.0 All the components shall be accessible from front.

9.0 Access to the operating handle of the incoming isolating switch shall be from the front of the cubicle without opening the front door.

10.0 Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cubicle.

11.0 Protective insulated cover plate (3 mm thick Bakelite sheet) shall be provided inside the cubicle to shroud all the live parts.

12.0 Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.

13.0 Neoprene rubber gasket shall be provided for all the doors, removable covers & between adjacent Covers, suitable locking devices.

14.0 Doors shall have concealed hinges.

15.0 Labelling Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of :- 5 mm for components and module name plates.

16.0 Danger board on front and rear sides in English, Hindi and local language.

17.0 Earthing two separate earthing terminals will be provided.

18.0 Limiting dimensions -
  - Width of SLDB: - 800 mm
  - Depth of SLDB: - 300 mm
  - Height of SLDB: - 400 mm (min)


20.0 The Busbars Arrangement Three phase & neutral., Material High conductivity electrolytic aluminium alloy confirming to grade E91E as per IS-5082 -1981.Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.

21.0 Isolating Equipment 3 pole ELCB, ELCB shall be of AC 23 duty category conforming to IS: 13947-1993 having fully shrouded contacts.

22.0 1.1Kv grade single core, black colour PVC insulated, stranded copper conductor of minimum size 2.5

23.0 Marking - Wiring will be properly marked as per relevant IS.

24.0 Terminals - Power & control terminals shall be segregated by insulating material like hylam / bakelite sheet, Terminals shall be ELMEX type suitable for connecting two cores of 2.5 sq.mm wires.

25.0 Cable glands Double compression cable glands for receiving cables.
NOTES FOR LDB SLDB ELDB & ESLDB:

1. The LDB, ELDB, SLDB & ESLD shall be metal clad, suitable for 415/240V, 3 phase and neutral.
2. The LDB, ELDB, SLDB & ESLD shall be totally enclosed, dust & vermin proof and welded from back and side.
3. Enclosure class IP54 & IP 55 (with canopy) for outdoor installation.
4. Type of execution Single front, Installation Indoor / Outdoor (with canopy).
5. The LDB, ELDB, SLDB & ESLD shall be 2 mm thickness, CRCA Sheet steel.
6. The Cable entry - Incomer: Bottom cable entry and Outgoing: Top / Bottom cable entry.
7. The LDB, ELDB, SLDB & ESLD shall be One Incomer and outgoing.
8. All the components shall be accessible from front.
9. Access to the operating handle of the incoming isolating switch shall be from the inside of the cabinet without opening the front door.
10. Operating knobs of outgoing MCBs shall be accessible only after opening the front door of the cabinet.
11. Protective insulated cover plate shall be provided inside the cabinet to shroud all the live parts.
12. Gland plate undrilled detachable gland plates (3 mm thick) shall be provided at the top and bottom with suitable gaskets for cable entry.
13. Gland plate shall be provided for all the doors, removable covers & between adjacent covers, with suitable locking devices.
14. Doors shall have concealed hinges.
15. Labeling: Clear legible identification labels (anodized aluminium with white letters engraved on black background) with letter sizes of 5 mm for components and module name plates.
16. Danger board on front and rear sides in English, Hindi and local language.
17. Earthing: Two separate earthing terminals will be provided.
18. Limiting dimensions - Width of SLDB: 800 mm
19. Depth of SLDB: 300 mm
20. Height of SLDB: 400 mm (min)
22. The Busbars Arrangement: Three phase & neutral, Material: High conductivity electrolytic aluminium alloy conforming to grade E91E as per IS-5082 - 1981. Busbar Rating shall be able to carry continuously the connected load (considering all derating factors) plus a 25% margin.